

Figure 1

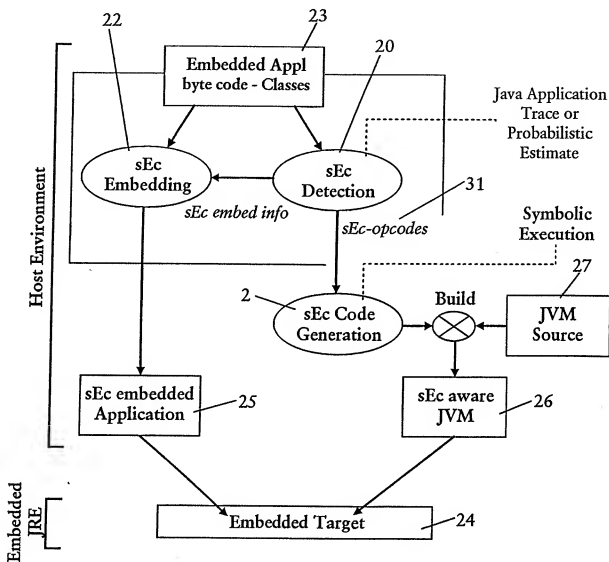


Figure 2

SEC_hook [Dot, loopit, ()V < offset:31, NUM_INS:9, SIZE:12>	SEC_hook [Dot, loopit, ()V <offset:54, NUM_INS:11, SIZE:15>
<i>Begin Basic Block</i> ALOAD_1 ILOAD_3 ALOAD_2 ILOAD_3 BIPUSH DUP_X2 IASTORE IASTORE IINC <i>End Basic Block</i>	<i>Begin Basic Block</i> ALOAD_1 ILOAD_3 IALOAD ALOAD_2 ILOAD_3 IALOAD IMUL ILOAD IADD ISTORE IINC <i>End Basic Block</i>
[1800000]: Bytecode Hit Count sEc opcode: sEcopcode 235	[2200000]: Bytecode Hit Count sEc opcode: sEcopcode_236

Figure 3

<pre> public class A { int a; public void set(int setvalue) {a = setvalue;} public int get() {return a;} public int square () {return a*a;} } </pre>	<pre> public class B { int b; public void set(int setvalue) {b = setvalue;} public int get() {return b;} public int cube () {return b*b*b;} } </pre>
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Figure 4a

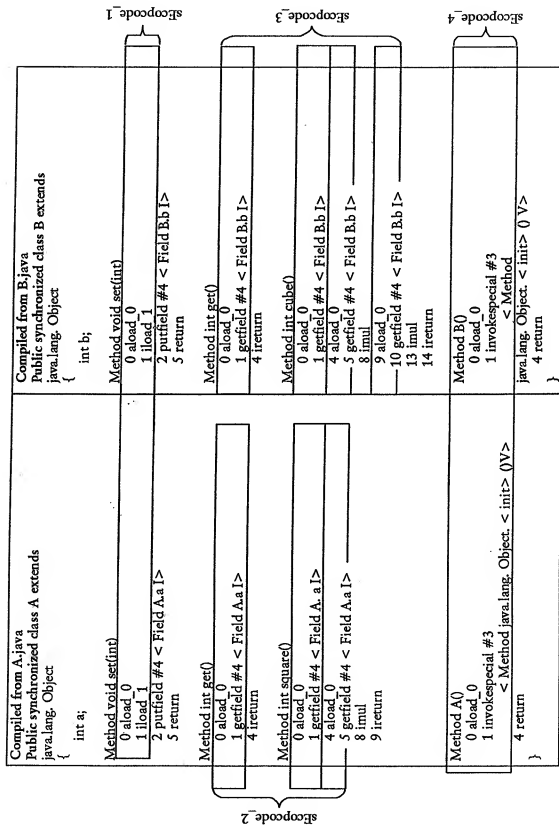


Figure 4b

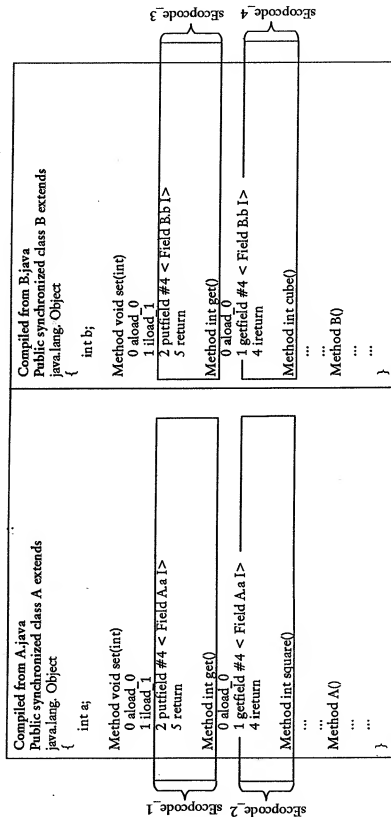


Figure 5

sE-opcode sequence	Symbol created	eEc Symbolic state →	sEc Local Var Table					Code Generated in 'C'
			1	2	3	4	5	
Prologue		//well formed sEc-opcode, no code generated						// No code generated
ALOAD 1	O1	01	01					O1 = JLV(1)
ILOAD 3	O2	01,02			02			O2 = JLV(3)
ILOAD	O3	03						O3 = Macr(O1, O2)
ALOAD 2	O4	03,04		04				O4 = JLV(2)
ILOAD 3	O5	03,04,05			05			O5 = O2
ILOAD	O6	03,06						O6 = Macr(O4, O5)
IMUL	O7	07						O7 = O3 * O6
ILOAD 5	O8	07,08					08	O8 = f(JLV(1))
IADD	O9	09						O9 = f(O7,O8))
ISTORE 5							09 ^D	// No code generated
IINC 3 1					05 ^D			O5 ^D = f(O5,1)
Epilogue		// No stack update // consolidated JVM pc update						JLV(3) = O5 JLV(5) = O9 PC = PC + 15
JVM_word *Ptr_lvp = JVM_stack_base + lvp // Pointer to current Java invocation Frame								
//								
#define JLV(x) *(Ptr_lvp + x)								// Reference to Java Local Variable on a Java Frame
Macr(O1, O2)								// Macro to fetch O2 th element for O1 array object // O1 and O2 are macro parameter.

Figure 6